

Kennedy/Jenks Consultants

Engineers and Scientists

2151 Michelson Drive, Suite 100
Irvine, California 92715
714-261-1577
FAX 714-261-2134

10 February 1997

Privileged - Attorney Work Product

Mr. S. Mario Stavale
McDonnell Douglas Realty Company
4060 Lakewood Boulevard, 6th Floor
Long Beach, CA 90808-1700

Subject: Douglas Aircraft C-6 Facility
Phase II Investigation
Torrance, California
K/J 97400X.00

Dear Mr. Stavale:

Kennedy/Jenks Consultants (Kennedy/Jenks) is pleased to confirm with McDonnell Douglas Realty Company (Realty) the basis of the Phase II investigation at the Douglas Aircraft C-6 facility located in Torrance, California. The project approach, schedule, and cost estimate are based upon meetings that began on 22 January 1997, and have continued through 05 February 1997. With limited modifications, it also confirms our conversation of 04 February 1997.

BACKGROUND

Kennedy/Jenks previously performed Phase I investigations for the C-6 facility under separate work orders for Realty. As a result of those investigations and a limited Phase II investigation conducted for Parcel A, Kennedy/Jenks was asked to recommend a comprehensive Phase II investigation for the facility that met the following objectives:

- Determine the estimated lateral and vertical extent of potential contamination in the soils throughout the facility
- Collect sufficient additional soils data to satisfy the requirements of a risk assessment (by others) for the entire facility.

Since the 22 January 1997 meeting, Kennedy/Jenks personnel have worked closely with Realty project management and their associate, Dr. Michael Young, to define the extent of the investigation and the project approach. The scope of work that follows, and the associated cost estimate and project schedule, are consistent and in accordance with the objectives of the program. It is also our understanding that Realty has negotiated this program with the appropriate regulatory agencies and that it is consistent with their needs.

Ms. S. Mario Stavale
McDonnell Douglas Realty Company
10 February 1997
Page 2

PROJECT APPROACH

Kennedy/Jenks will conduct and manage the Phase II investigation using facilities provided in Building 18 by Realty. Mr. Rus Purcell, a registered geologist in California, will serve as Project Manager and will be located in the field until all field activities have been completed. Rus will control the project in the field and make timely decisions that will permit the project objectives to be met. Kennedy/Jenks and its subcontractors recognize that the facility is still in operation and will work closely with facility personnel to accomplish the objectives of the program with limited impact on the ongoing operations. Mr. John Marasco has been identified by Realty as our field contact. John will serve as facility liaison for Realty, and will coordinate site needs with Rus. Realty will provide the field office facilities, including fax and telephone service, utilities for Kennedy/Jenks personnel and its subcontractors, local transportation for personnel within the facility, and other services that may become necessary and are most cost-effectively provided by Realty.

Prior to mobilization in the field, a site-specific Health and Safety Plan will be completed and reviewed with all field personnel. A site visit will be made to familiarize assigned personnel with field conditions. During the site investigation, Rus will be assisted by several teams of geologists and other technical personnel who have the appropriate 40-hour OSHA health and safety training.

In order to provide timely screening and sample turnaround, two mobile laboratories will be located on site. Realty will need to provide dedicated electrical service (one 20-amp circuit per laboratory) for the laboratories. Their locations will be coordinated so as not to interfere with ongoing operations; John and Rus will identify their locations prior to field mobilization.

An additional outside laboratory will be contracted to provide services not available from the mobile laboratories.

To closely control the field activities, Rus will hold daily field meetings. Realty representatives may attend any and all of these meetings. A more formal Project Status Review Meeting will be held once a week at the site, with Realty and Kennedy/Jenks' Project Manager, Rus Purcell, and Project Sponsor, Mike Greenspan, present.

To assure consistency, Rus will establish the format of the draft reports and verify in advance with Realty that the format meets all of the risk assessment requirements and commitments to the appropriate regulatory agencies. Draft reports will be prepared in Kennedy/Jenks' Irvine office and will be under Rus' direct supervision.

Ms. S. Mario Stavale
McDonnell Douglas Realty Company
10 February 1997
Page 3

SCOPE OF WORK

The Scope of Work for the program includes the following general tasks:

Task 1: Project Planning

This task includes all activities since the 22 January 1997 meeting that identified the site-specific needs for the successful completion of the project. The project has been broken down into separate areas that meet Realty's completion dates. Subcontractor requirements have been identified and coordinated with Realty to meet the needs of the risk assessment and agency requirements.

Task 2: Mobilization

This task includes the finalization of subcontractor agreements and field requirements. During this period, a site specific Health and Safety Plan will be produced, field personnel will be introduced to the site and program, and field supplies will be procured.

The enclosed Field Sampling Plan identifies the rationale used in determining the location and depths of all borings, and identifies the analytical tests to be performed. Field conditions and laboratory results may either add to or modify the need for borings and the analyses to be performed. Rus will keep Realty informed of any substantive findings that modify the program and are of concern to all parties.

Figures 1 through 8 (submitted under separate cover on 6 February 1997) identify the proposed boring locations; these locations are subject to field verification and may be modified to suit. Kennedy/Jenks will clear all boring locations with a geophysical survey; concrete coring will begin concurrently for locations where concrete has been identified. To maximize schedule efficiency and minimize mobilization/demobilization costs, all geophysical work, concrete coring, and auger drilling equipment will be done in all areas in succession rather than on a piece-meal basis.

Task 3: Field Investigation

Each of the areas will have a team of two individuals, one of which will be a geologist. Since Areas 1/1A and the Supplemental Areas are most critical to Realty, they will be started first and be completed before we begin our investigation in the other areas. Subsequently, Areas 2 through 6 will be started and completed. Field conditions may indicate a need for modifications to the sampling plan. For example, it will be more cost-effective to complete use of the field auger in all areas and then demobilize it, as opposed to keeping it on site until it is used in a sequential work area. Decisions such as these will rest with Rus in the field. He will keep Realty informed of any substantive changes or significant preliminary findings.

Ms. S. Mario Stavale
McDonnell Douglas Realty Company
10 February 1997
Page 4

Task 4: Draft Report

Rus will establish the format to be used for each of the area reports. Once completed, three copies will be submitted to Realty for comments.

Task 5: Final Report

Once comments have been received from Realty, they will be reviewed and agreed-on comments will be incorporated into the Final Report. Three copies of the Final Report will be submitted to Realty, who will coordinate further distribution within McDonnell Douglas and the regulatory agencies.

PROJECT TEAM

Figure 9 presents the project team organization for this project. Kennedy/Jenks' team will be led by Mr. Rus Purcell as Project Manager. Rus is intimately familiar with the C-6 site, having direct involvement in the Phase I's, limited Phase II, and limited groundwater monitoring program conducted at the site. Rus is a registered geologist in California.

Mr. Mike Greenspan, P.E., will serve as Project Sponsor, representing Kennedy/Jenks' senior management's interest and commitment to this critically important project. As Regional Manager for Kennedy/Jenks' Southern California Industrial Services, Mike will make sure that all of the firm's resources are made available to meet the objectives and successful completion of this project. Mike will regularly attend field meetings and will provide overall project quality assurance. He has assisted Rus and Realty in strategizing and scoping the project.

Rus will utilize the services of a number of Kennedy/Jenks personnel who are familiar with the site and Kennedy/Jenks' quality standards and procedures. Similarly, subcontractors will be used for geophysical clearance of boring locations, concrete coring, drilling activities, and laboratory analysis. Each of the selected subcontractors have been previously utilized by Kennedy/Jenks and provide the quality of service that we require; many have previously provided services at the C-6 facility and have a familiarity with the site and its operations and safety requirements.

SCHEDULE

Figure 10 presents the project schedule. The field investigation is broken down by areas and indicates the expected field personnel to be used (see also Figure 9, Organization Chart). Currently, a 5-day work week is visualized, with limited Saturday work for miscellaneous

Ms. S. Mario Stavale
McDonnell Douglas Realty Company
10 February 1997
Page 5

activities. At present, the schedule does not include any float; should field conditions or schedule needs dictate modifications are necessary, Kennedy/Jenks personnel are prepared to work weekends. Other schedule-related assumptions are contained in the schedule's appended notes.

COMMERCIAL CONSIDERATIONS

Kennedy/Jenks will execute this program on a time-and-materials basis in accordance with Attachment A, our 03 January 1996 Schedule of Charges, which are hereby attached and made part of this program. Other terms and conditions will be in accordance with our Geotechnical Consulting Services contract, FD835WFA, dated 24 September 1990.

Based on the Scope of Work and Project Approach in this document, the estimated costs for the project are presented in Table 1. Mobile and off-site laboratory costs, as well as probe drilling costs, are based on highly discounted project-specific quotations. The laboratory estimated cost is based on analysis costs for all borings and depths; Kennedy/Jenks believes that, based on the Phase I use of property, that laboratory analyses may be less. Geophysics, coring, and auger drilling are estimated based on recent Kennedy/Jenks' projects; Kennedy/Jenks' labor is based on the durations shown in the project schedule. Miscellaneous other direct costs (ODCs) include travel and living expenses and other costs associated with field services and report preparation.

Table 1 - Estimated Costs

Kennedy/Jenks labor	\$183,000
Laboratory analysis (mobile)	145,000
Laboratory analysis (off site)	200,000
Other subcontractors	
Probe	46,000
Coring	17,000
Geophysics	10,000
Auger	23,000
Miscellaneous ODCs	16,000
Total estimated cost:	\$640,000

A contingency analysis has been done for each of the individual categories and subcontractors. Should all contingencies be necessary -- a statistically improbable event -- the cost could approximate \$826,000. This includes a \$100,000 contingency should all risk assessment off-site laboratory requirements remain. The upward limit includes contingencies for additional field

Ms. S. Mario Stavale
McDonnell Douglas Realty Company
10 February 1997
Page 6

and sampling needs that are not able to be defined at this time, as well as other normal project contingencies that may occur.

Rus will control the costs and schedule associated with the project and keep Realty informed of any significant deviations on a weekly basis.

KENNEDY/JENKS' COMMITMENT

Kennedy/Jenks recognizes the importance of this project's successful completion. Kennedy/Jenks is committed to providing whatever resources are necessary to complete all of the objectives to Realty's total satisfaction. I will make myself available to you and your team at any time to make this commitment a reality.

As a confirmation of our earlier discussions and verbal commitment to this program by Realty, I would appreciate it if you would sign the attached authorization for \$640,000 and return it to us promptly. Kennedy/Jenks will reassess the project cost in mid-March once the number of analyses required can be better determined. In the interim, if you have any questions or require additional information, please call me or Rus at (714) 261-1577.

Very truly yours,

AUTHORIZED BY:

KENNEDY/JENKS CONSULTANTS

McDONNELL DOUGLAS REALTY CO.



Michael Greenspan, P.E.
Manager, Southern California Industrial Services

Signature

Name

cc: Michael Young, Ph.D.
David D. Kennedy
Rus Purcell

Title

Enclosures

Date

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graph TD
    A[PROJECT SPONSOR/  
QA/QC  
Mike Greenspan, P.E.] --- B[McDONNELL DOUGLAS  
REALTY CORP.  
Mario Stavale]
    A --- C[INTEGRATED  
ENVIRONMENTAL SERVICES  
Michael Young, Ph.D.]
    B --- D[PROJECT MANAGER  
Rus Purcell, R.G.]
    D --- E[FIELD SERVICES  
*Shane Scrimshaw  
*Jay Knight  
*Ken Knight  
*Dale Schneeberger, R.G.  
**Morris Balderman  
**Nancy Boschetto  
**Rus Purcell, R.G.  
**John Landgard, R.G.]
    D --- F[SUBCONTRACTORS  
Rus Purcell, R.G.]
    D --- G[REPORTS  
Nancy Boschetto  
Morris Balderman  
Rus Purcell, R.G.  
Sue Henry, Ph.D.  
Sarah Bartling, R.G.]
    D --- H[CONCRETE CORING]
    D --- I[PUSH DRILLING]
    D --- J[AUGER DRILLING]
    D --- K[LABORATORY]
  
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Figure 9
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